

KARAYEV, Z. Sh.

Reaction of selenides of gallium and a lanthanide (erium and samarium of the type  $\text{Ln}_2\text{III}_3\text{VI}$ ). G. Kh. Efendiyev, Z. Sh. Karayev, I. O. Nasilov.

Solid solutions in the quasibinary systems  $\text{Ga}_2\text{S}_3\text{-Ga}_2\text{Te}_3$  and  $\text{Ga}_2\text{S}_3\text{-Ga}_2\text{Se}_3$ . P. G. Rustanov, B. I. Mardakhayev, E. Melikova, M. Aliyev, M. Safarov. (Presented by G. Kh. Efendiyev--10 minutes).

Chemical bonding, structure of the energy zones and some properties of semiconducting compounds of rare earth elements with selenium. G. F. Karavayev (10 minutes).

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

NASIBOV, I.O.; KARAYEV, Z. Sh.

Interaction of the selenides of  $A^{III}_2$  and  $B^{VI}_3$  praseodymium  
and gallium. Azerb. khim. zhur. no.5:105-111 '63  
(MIRA 17:8)

L 27193-65 EAT(m)/T/ETP(t)/BTP(b) IJP(c) RDM/JD/JG  
ACCESSION NR: AP5005521 8/0316/64/000/005/0103/0107

AUTHOR: Efendiyev, G. Kh.; Karayev, Z. Sh.; Nasibov, I. O. 18

TITLE: Interaction between lanthanum and gallium selenides ( $La_2^{III}Ga_2^{III}Se_3$ ) 16

SOURCE: Azerbaydzhanskiy Khimicheskiy zhurnal, no. 5, 1964, 103-107 27 27 1

TOPIC TAGS: lanthanum selenide, gallium selenide, lanthanum gallium selenium system, phase diagram, lanthanum selenogallate, chemical property, electrical property

ABSTRACT: Interactions in the  $La_2Se_3$ - $Ga_2Se_3$  system have been studied over the entire composition range by thermal, x-ray, chemical, and micrographic analyses, and by microhardness determinations. The  $La_2Se_3$ - $Ga_2Se_3$  alloys in various molecular ratios were synthesized at 1000-1200C in evacuated quartz ampuls. A phase diagram of the system indicated a partial, mutual solubility of the selenides forming solid solutions within the regions up to 20 mol% of each component, two eutectics at 980 and 860C, and a compound corresponding to the equimolar  $La_2Se_3$ : $Ga_2Se_3$  ratio. Chemical analysis and x-ray powder diffraction patterns confirmed the formula  $LaGaSe_3$  ascribed to the compound. The microhardness was found to be maximum for a composition with 50 mol%  $Ga_2Se_3$ . The compound was found to be stable in vacuum up to its 18

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L 27193-65

ACCESSION NR: AP5005521

melting point (1120°C), stable in the air up to 200°C, and insoluble in most chemical reagents, except in HCl and HNO<sub>3</sub>. The lanthanum seleno-gallate, LaGaSe<sub>3</sub>, crystallized in a hexagonal system. The electrical conductivity of LaGaSe<sub>3</sub> and of most of the other La<sub>2</sub>Se<sub>3</sub>-Ga<sub>2</sub>Se<sub>3</sub> alloys increased with increasing temperature in the 40—160°C range. The width of the forbidden energy gap within the system studied was minimum for LaGaSe<sub>3</sub>. Orig. art. has: 5 figures and 3 tables. [JK]

ASSOCIATION: none

SUBMITTED: 00

NO REF SOV: 003

ENCL: 00

OTHER: 001

SUB CODE: MM, Gc

ATD PRESS: 3191

Card 2/2



1. 19730-65 EWT(h)/EWP(t)/EWP(b) TJP(c) RDW/JD/JG

ACCESSION NR: AP4049804

S/0316/64/000/004/0111/0114

AUTHOR: Efendiyev, G. Kh.; Karayev, Z. Sh.; Nasibov, I. O.

TITLE: Interaction of gallium and neodymium selenides

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 4, 1964, 111-114

TOPIC TAGS: gallium selenide, neodymium selenide, ternary semiconductor, selenide semiconductor

ABSTRACT: The purpose of this work was a study of the ternary system Nd-Ga-Se along the cross section  $\text{Nd}_2\text{Se}_3$ - $\text{Ga}_2\text{Se}_3$ . No data are available in the literature about this system, although its components have been studied separately. A series of melts of these components in proportions from 5:1 to 1:5  $\text{Nd}_2\text{Se}_3$ : $\text{Ga}_2\text{Se}_3$  were prepared, and aged for 250 hrs. at 700C (just under the solidus line). Thermal, radiographic and microhardness analyses established that in the system  $\text{Nd}_2\text{Se}_3$ - $\text{Ga}_2\text{Se}_3$  there are two chemical compounds:  $\text{NdGaSe}_3$  and  $\text{NdGa}_4\text{Se}_7$ . In addition, limited solid solutions are formed in the areas rich in  $\text{Nd}_2\text{Se}_3$  and  $\text{Ga}_2\text{Se}_3$ . Studies on electrical conductivity, depending on temperature, showed that at higher temperatures both compounds act as semiconductors, the conductivity increasing with temperature. The widths of the forbidden zones were also determined.

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L 19730-65

ACCESSION NR: AP 049804

Compound I belongs to the electron conduction type, while compound II is a hole conductor. The electroconductivity of neodymium selenogallate at room temperature is approximately  $10^{-8} \text{ ohm}^{-1} \text{ cm}^{-1}$  but at 140C it is  $3 \cdot 10^{-3} \text{ ohm}^{-1} \text{ cm}^{-1}$  for I and  $5 \cdot 6 \cdot 10^{-2} \text{ ohm}^{-1} \text{ cm}^{-1}$  for II. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: IC, EC

NC REF SOV: 003

OTHER: 004

Cord

2/2

I-25676-65 EWT(m)/EWP(c)/EWP(b) IJP(o) RDM/JD/JG

ACCESSION NR: AP4049427

S/0316/64/000/001/0125/0131

AUTHOR: Mendiyeu, G.Kh.; Karayev, Z.Sh.; Nagibov, I.Q.

TITLE: Interaction of the selenides of samarium and gallium

SOURCE: Azerbaydzhansky khimicheskiy zhurnal, no. 1, 1964, 126-131

TOPIC TAGS: samarium selenide, gallium selenide, samarium galloselenide, selenide alloy, solid solution

ABSTRACT: The nature of the interaction of  $\text{Sm}_2\text{Se}_3$  and  $\text{Ga}_2\text{Se}_3$  was studied, as well as the physico-chemical properties of the resulting products. Alloys of the cross-section  $\text{Sm}_2\text{Se}_3$ — $\text{Ga}_2\text{Se}_3$  were synthesized from  $\text{AM}_2\text{BVI}_3$  selenides of samarium and gallium in evacuated ( $\sim 10^{-3}$  mm) quartz ampoules at 1200–1250°C. The homogeneity of the samples was studied by thermal and x-ray analyses and by determination of microscopic hardness.  $\text{Sm}_2\text{Se}_3$  and  $\text{Ga}_2\text{Se}_3$  in a 1:1 ratio form  $\text{SmGaSe}_3$ , with a hexagonal unit cell with periods of  $a = 10.30 \text{ \AA}$  and  $c = 6.25 \text{ \AA}$ . The volume of the molecule of  $\text{SmGaSe}_3$  was calculated as  $143.4 \text{ \AA}^3$ .  $\text{SmGaSe}_3$  is stable in a vacuum up to its m.p. It does not dissolve in organic solvents and cold  $\text{H}_2\text{SO}_4$ ; in hot  $\text{H}_2\text{SO}_4$ , it dissolves slowly; in  $\text{HCl}$  and  $\text{HNO}_3$ , it dissolves well with the separation of elementary Se; it dissolves poorly in alkali. The selenides form

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L 25676-65

ACCESSION NR: AP4049427

limited solid solutions in the region rich in  $\text{Sm}_2\text{Se}_3$  and  $\text{Ga}_2\text{Se}_3$ . Some of their properties are listed in Table 1 of the Enclosure. Orig. art. has: 4 tables and 5 figures.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 01

SUB CODE: IC, GC

NO REF SOY: 005

OTHER: 005

Card 2/3

EFENDIYEV, G.Kh.; KARAYEV, Z.Sh.; NASTIROV, I.O.

Interaction of the selenides  $\text{As}_2\text{S}_3$  of neodymium and gallium.  
Azerb. Khim.zhur. no.4:111-114 '64. (MIRA 18:3)



EFENDIYEV, G.Kh.; KARAYEV, Z.Sh.; NASIBOV, I.O.

Interaction of  $AlI_2BVl_3$  type cerium and gallium selenides.

Izv. AN SSSR. Ser. fiz. 28 no.6:1103-1106 Je '64.

(MIRA 17:7)

1. Institut khimii AN Azerbaydzhanskoy SSR.

A 1 11587-66 EWT(m)/ETC(F)/EWG(m)/EWP(t)/EWP(b) IJP(c) RDW/JD/JG

ACC NR: AP5028894

SOURCE CODE: UR/0316/65/000/004/0110/0115

AUTHOR: Karayev, Z. Sh.; Gadymov, A. M.; Murguzov, M. I. 52

ORG: Institute of Chemistry, AN AzerbSSR (Institut khimii AN AzerbSSR) B

TITLE: Interaction between  $A_2^{III}B_3^{VI}$  tellurides of samarium and gallium 27

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 4, 1965, 110-115

TOPIC TAGS: tellurium, samarium, gallium, phase diagram, phase transition, tellurium alloy, samarium alloy, gallium alloy, semiconductivity, *semiconducting material*

ABSTRACT: The object of the study was to synthesize new chemical compounds and alloys and to learn about their properties.  $Sm_2Te_3$ - $Ga_2Te_3$  alloys were prepared by fusing mixtures of  $Ga_2Te_3$  with metallic Te and Sm in quartz ampoules at 1000-1180°C and  $1 \cdot 10^{-3}$  mm Hg.  $Sm_2Te_3$  was homogenized for 380 hours at 400°C and  $10^{-3}$  mm Hg in ratios of 5:1, 4:1, 3:1, 2:1, 1:1. The phase diagram of the  $Sm_2Te_3$ - $Ga_2Te_3$  system is shown in fig. 1. A new chemical compound of samarium-gallium-tellurium was found: its formula is  $SmGaTe_3$ . The existence of a limited solid solution in the  $Ga_2Te_3$ - $Sm_2Te_3$  system was established. It was also found that alloys and compounds of the  $Sm_2Te_3$ - $Ga_2Te_3$  system are semiconductors.

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L 11587-66

ACC NR: AP5028894

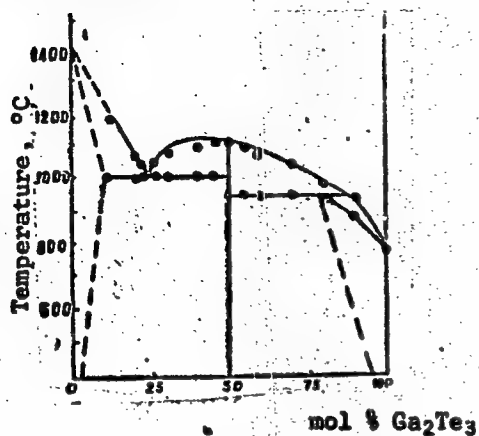


Fig. 1. Phase diagram of the  $\text{Sm}_2\text{Te}_3$ - $\text{Ga}_2\text{Te}_3$  system.

Orig. art. has: 5 figures, 3 tables.

SUB CODE: 07//,20/ SUBM DATE: 01Aug64/ ORIG REF: 002/ OTH REF: 004

HW  
Card 2/2

L 31553-66

ACC NR: AP6005113

SOURCE CODE: UR/0316/65/000/005/0082/0085

AUTHOR: Gasnov, B. G.; Ibragimov, N. Yu.; Karayev, Z. Sh.; Nasibov, I. O. 42  
B

ORG: Institute of Inorganic and Physical Chemistry, AN Azerb. SSR (Institut neorganicheskoy i fizicheskoy khimii AN Azerb. SSR)

TITLE: Infrared absorption spectra of selenogallates  $\text{MeGaSe}_3$  of certain lanthanides

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 5 , 1965, 82-85

TOPIC TAGS: selenium compound, gallium compound, lanthanum compound, praseodymium compound, neodymium compound, samarium compound, cerium compound, infrared spectrum, refractive index, x ray diffraction

ABSTRACT: An attempt was made to establish general relationships between the optical properties and composition of the compounds  $\text{LaGaSe}_3$ ,  $\text{CeGaSe}_3$ ,  $\text{PrGaSe}_3$ ,  $\text{NdGaSe}_3$ , and  $\text{SmGaSe}_3$ . An IKS-14 infrared spectrograph and MIN-8 polarizing microscope were used. All the IR absorption spectra of these compounds were found to be basically similar, and not very different from the IR spectra of the corresponding selenides. This shows that the selenogallates studied are analogous in character. These results are in agreement with the reported results of thermographic, x-ray diffraction, and chemical analyses. Microscopic examination showed the selenogallates to be nontransparent, i. e., no pleochroism or extinction was observed. The refractive indices of the compounds were measured and found to be the same,

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I 31553-66

ACC NR: AP6005113

1.5085;  $\text{nd CeGaSe}_3 = 1.4785$ . The data confirm the general characteristics of the molecular nature of selenogallates of the cerium subgroup elements. Orig. art. has: 1 figure and 1 table.

SUB CODE: 072c/SUBM DATE: 18Dec64 / ORIG REF: 003.

Card 2/2 *IC*



L 46142-66 EWT(m)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6025826

SOURCE CODE: UR/0316/66/000/001/0112/0115

AUTHOR: Karayev, Z. Sh.; Keyserukhsaya, L. G.; Aliyeva, Sh. A.; Gadymov, A. M. 44  
B

ORG: Institute of Inorganic and Physical Chemistry, Academy of Sciences AzerbSSR  
(In-m neorgan. i fiz. khimii AN AzerbSSR)

TITLE: Synthesis and study of yttrium sulfogallate,  $YGaS_3$ , and yttrium sulfoindate,  $YInS_3$  27 27

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 1, 1966, 112-115

TOPIC TAGS: yttrium, indium, gallium compound, sulfur compound

ABSTRACT: Yttrium sulfogallate,  $YGaS_3$ , and yttrium sulfoindate,  $YInS_3$ , were synthesized and their crystallographic structures, elemental composition, stabilities, and electrical conductivities were examined. The work is part of an extensive program, presently being carried out at the Institute of Inorganic and Physical Chemistry, Academy of Sciences AzerbSSR, aimed at finding new types of semiconductors. The  $YGaS_3$  and  $YInS_3$  were prepared by fusing mixtures of the elements in stoichiometric ratios in sealed quartz ampoules evacuated to  $1 \cdot 10^{-3}$  mm Hg. Initially, half of an ampoule was slowly heated in a furnace to  $1000^\circ C$  while the other half, outside the furnace, was cooled with water. Then, the whole ampoule was placed inside the furnace and held there for 2 hrs at  $1250^\circ C$ . It was found that  $YGaS_3$  has a hexagonal crystal lattice.

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L 46109-66 EWT(m)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6023927

SOURCE CODE: UR/0363/66/002/007/1322/1323

AUTHOR: Karayev, Z. Sh.; Nasibov, I. O.; Aliyeva, Sh. A.

ORG: Institute of Chemistry, Academy of Sciences, AzerbSSR (Institut khimii Akademii nauk AzerbSSR)

TITLE: Synthesis and study of sulfogallates of certain lanthanides

SOURCE: AN SSSR. Izv. Neorg materialy, v. 2, no. 7, 1966, 1322-1323

TOPIC TAGS: gallium compound, sulfur compound, lanthanum compound, cerium compound, praseodymium compound, neodymium compound, samarium compound

ABSTRACT: The object of the work was to synthesize sulfogallates of lanthanum, cerium, praseodymium, neodymium, and to study certain properties of these compounds. The synthesis was accomplished by directly reacting stoichiometric amounts of the elements. X-ray diffraction analysis showed that all the sulfogallates of the cerium subgroup elements are isostructural. Their lattice constant  $a$  varies linearly with the radius of the lanthanides, whereas constant  $c$  undergoes little change. The molecular volumes of the sulfogallates studied are close to the arithmetical mean of molecular volumes of the corresponding sulfides ( $\text{In}_2\text{S}_3$  and  $\text{Ga}_2\text{S}_3$ ), suggesting the following equation for the reaction of formation:



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UDC: 546.681'65'221

L 46109-66

ACC NR: AP6023927

Electrical conductivity measurements in the 20-200°C range at an applied voltage of 36 V gave values close to  $10^{-9} \text{ ohm}^{-1} \text{ cm}^{-1}$ . The sulfogallates readily react with strong acids, but are stable in organic solvents and in dilute or concentrated alkalis. Orig. art. has: 3 tables.

SUB CODE: 07/ SUBM DATE: 29Sep65/ ORIG REF: 002/ OTH REF: 001

Card 2/2 JS

KARAYEVA, A.M., assistant

Treatment of cracked nipples as revealed by data from the  
obstetrical clinic of the Andizhan Medical Institute. Med.  
zhur. Uzb. no. 2:12-13 F '61. (MIRA 14:2)

1. Iz kafedry akusherstva i ginekologii (zav. - kand.med.nauk  
S.A. Adintsova) Andizhanskogo gosudarstvennogo meditsinskogo  
instituta.

(BREAST—DISEASES)

KARAYEVA, F.

Vagosympathetic cervical novocaine block in esophageal and cardiac cancers as a method of control of syndrome of dysphagia. Trudy AMN SSSR 21 no.5:7-12 '52.

(MIRA 10:8)

1. Iz nauchno-issledovatel'skogo instituta rentgenologii, radiologii i onkologii Azerbaydzhanskoy SSR.

(ESOPHAGUS, neoplasms,

causing dysphagia, prev. by procaine cervical block)

(STOMACH, neoplasms,

cardiac cancer causing dysphagia, prev. by procaine cervical block)

(DEGLUTITION DISORDERS,

dysphagia in cancer of cardia & esophagus, prev. by procaine cervical block)

(ANESTHESIA, REGIONAL, in various diseases,

procaine cervical block in dysphagia in cancer of cardia & esophagus)

(PROCAINE, therapeutic use,

dysphagia in cancer of cardia & esophagus, cervical nerve block)



GAPUROV, M.; SAPIYEV, I.; KIRMANOV, G.; AVZUMARADOV, I.; KLYCHMARADOV, E.;  
KHALILYEV, P.; KREDOV, V.

In the land of sands and creation. Voen. zhurn. 1965:26-9. P. 65.

1. Predsedatel' Soveta Ministrov Turkmeniskoy SSR (for Gapurov).
2. Predsedatel' sel'skokhozyaystvennoy arteli "Sovet Turkmenistana" (for Sapiyev).
3. Predsedatel' Leninskogo ispolnitel'nogo komiteta rayonnogo Soveta deputatov trudovychchikov Ashkhabada (for Karayeva).
4. Nachal'nik Ashkhabadskoy shkoly grazhdanskoy oborony Vsesoyuznogo obshchestva sodeystviya armii, aviatsii i flotu SSSR (for Avzumaradov).
5. Nachal'nik Ashkhabadskikh kursov grazhdanskoy oborony (for Klychmaradov).
6. Granichnik na granitse Turkmenistana, predsedatel' kollektiva "Korveta", Turkmenistanskaya KP (for Khalilyev).
7. Boyetskaya sluzhba "nogo ot", Turkmenistanskaya KP (for Kredo).
8. Inzhener Turkmeniskoy SSR (for Kredo).

USSR/Human and Animal Physiology. Nervous System. General Problems.

T

Abs Jour: Ref Zhur-Biol., No 20, 1958, 93539.

Author : Karayeva, Ks. I.

Inst : Azerbaydzhan Scientific Research Institute for Blood Transfusion.

Title : Clinical and Experimental-Research Material on Polyneuritis of Anemic Origin.

Orig Pub: So. Nauchn. tr. Azerb. n.-i. in-ta perelivaniya krovi, 1957, vyp. 3, 118-124.

Abstract: Basing his paper on the clinical study of 20 cases of anemia accompanied by symptoms of polyneuritis (P) and on experiments with 27 rabbits which had anemia, induced artificially by repeated blood-letting, the author distinguished anemic polyneuritis (AP) as the basic form

Card : 1/2

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APPROVED FOR RELEASE: 06/13/

LEBEDEV, Ye.M.; PERMITIN, Yu.Ye.; KARAYEVA, N.I.

Fouling of plates in the Black Sea. Trudy Inst. okean. 70:  
270-275 '63. (MIRA 17:7)

KARAYEVA, N. I.

Bilology of benthic diatoms in the western shore area of the  
Caspian Sea. Bot. zhur. 45 no.5:767-770 My '60.

(MIRA 13:7)

1. Botanicheskiy institut im. V.L. Komarova Akademii nauk  
Azerbaydzhanskoy SSR, Baku.

(Caspian Sea--Diatoms)

BABANOV, G.P., kand.med.nauk; KLYUCHIKOV, V.N., dotsent; KARAYEVA, N.I.;  
LILEYEVA, Z.V., dotsent

Clinical aspects of chronic intoxication with nitrile acrylic acid.  
Vrach.delo no.8:833-835 Ag '59. (MIRA 12:12)

1. Kafedra obshchey giginy, fakul'tativnoy terapii, nevropatologii,  
oto-rino-laringologii Yaroslavskogo meditsinskogo instituta.  
(ACRYLONITRILE--TOXICOLOGY)

KARAYEVA, N.I., assistant

Occurrence of chronic tonsillitis in children with chronic pneumonia and the effect of the treatment of tonsillitis on the course of pneumonia. Sbor. nauch. trud. Iyug. gos. med. inst. no. 28:35-39 ' 63 (MIRA 19:1'

1. Iz kafedry otolaringologii ( zav. kafedroy - doct. Yu.K.Korotkova) i kafedry detskikh bolezney ( zav. kafedroy - prof. A.I. Titova) Yaroslavskogo gosudarstvennogo meditsinskogo instituta (rektor - prof. N. Ye. Yarygin).



KARAYEVA, N.I.

Preliminary investigations of diatom growths attached to substrata  
in western shore waters of the Caspian Sea. Trudy Inst. bot.  
All Azerb. SSR 32:65-81 '60. (NIIA 14:2)  
(Caspian Sea--Diatoms)

KARAYEVA, N. I.

Cand Biol Sci - (diss) "Bottom-living diatomic algae of the western right bank of the Caspian Sea." Baku, Pub. Academy of Sciences Azerbaydzhani SSR, 1961. 20 pp; (Ministry of Higher and Secondary Specialist Education Ukrainian SSR, Khar'kov Order of Labor Red Banner State Univ imeni A. M. Gor'kiy); 200 copies; free; (KL, 6-61 sup, 207)

KARAYEVA, N.I.

Fouling diatoms near the western shore of the Caspian Sea. Trudy  
Inst. okean. 49:108-117 '61. (MIRA 15:1)  
(Caspian Sea--Marine fouling) (Diatoms)

KARAYEVA, N.I.

Origin of benthic diatom algae of the Caspian Sea. Izv. AN Azerb.  
SSR. Ser. biol. i med. nauk no.3:19-23 '63. (MIRA 16:6)  
(Caspian Sea--Diatoms)

KARAYEVA, N.I.

New diatom algae in the Caspian Sea. Izv. AN Azerb. SSSR. Ser.  
biol. i med. nauk no. 6:15-22 '63. (MIRA 17:5)

KARAYEVA, N.I.; ARBUZOVA, K.S.

Materials on the diatoms of fouling on the eastern coast of the  
Caspian Sea; preliminary report, Trudy Inst. okean. 70:29-40 '63.  
(MIRA 17:7)

SHIKHIYEV, I.A.; ALIYEV, M.I.; KARAYEVA, Sh.V.

Synthesis and conversion of tertiary  $\gamma$ -acetylenic alcohols  
containing silicon. Dokl.AN Azerb.SSR 15 no.12:1111-1113  
'59. (MIRA 13:4)

1. Institut neftekhimicheskikh protsessov AN AzerSSR. Pred-  
stavleno akademikom AN AzerSSR M.F.Nagiyevym.  
(Alcohols)



5.3700 2209.

S/079/60/030/009/005/015  
B001/B064

AUTHORS: Shikhiyev, I. A., Aliyev, M. I., Aslanov, I. A.,  
Karayeva, Sh. V.,

TITLE: Investigations in the Field of the Synthesis<sup>1</sup> and Conversion  
of Unsaturated Organosilicon Compounds. VII. Synthesis and  
Properties of Some Secondary and Tertiary  $\gamma$ -Silicon-con-  
taining Acetylene Alcohols<sup>1</sup>

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 9,  
pp. 2916-2919

TEXT: In the present paper (Ref. 1), the authors describe a method of synthesizing mono-, bi-, and trivalent  $\gamma$ -silicon-containing tertiary alcohols of the acetylene series. The present investigation deals with the synthesis of some representatives of the  $\gamma$ -silicon-containing secondary and tertiary acetylene alcohols by allowing the respective organomagnesium compound of the acetylene series to react with trialkyl chlorosilanes. The presence of the hydroxyl group in the  $\gamma$ -silicon-containing acetylene alcohols was confirmed by acetylation (Ref. 2) by the scheme given (details  
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IX

Investigations in the Field of the Synthesis  
and Conversion of Unsaturated Organosilicon  
Compounds. VII. Synthesis and Properties  
of Some Secondary and Tertiary  $\gamma$ -Silicon-  
containing Acetylene Alcohols

S/079/60/030/009/005/015  
B001/B064

in the experimental part). The following  $\gamma$ -silicon-containing acetylene alcohols were described: 1-trimethyl silyl-3-methyl pentin-1-ol-3; 1-dimethyl ethyl silyl-3-methyl pentin-1-ol-3; 1-trimethyl silyl pentin-1-ol-3; 1-trimethyl silyl-3-methyl hexine-1-methyl-5-ol-3; 1-trimethyl silyl-3-methyl heptin-1-ol-3; 1-triethyl silyl-3-methyl heptin-1-ol-3; 1-trimethyl silyl hexin-1-ol-3. The presence of a hydroxyl group in the alcohols obtained was confirmed by the following silicon-containing acetals synthesized from them: n-butyl trimethyl silyl methyl pentine-, n-butyl dimethyl ethyl silyl methyl pentine-, n-butyl triethylsilyl methyl pentine-, n-butyl trimethyl silyl dimethyl hexine-, n-butyl trimethyl silyl methyl heptine-, n-butyl triethyl silyl methyl heptine-, and n-butyl trimethyl silyl hexine acetal. The alcohols and acetals obtained are given together with their constants in a table. There are 1 table and 2 Soviet references.

ASSOCIATION: Institut neftekhimicheskikh protsessov Akademii nauk Azerbaydzhanskoy SSR (Institute of Petroleum-chemical Processes of the Academy of Sciences Azerbaydzhanskaya SSR)

Card 2/3

Investigations in the Field of the Synthesis  
and Conversion of Unsaturated Organosilicon  
Compounds. VII. Synthesis and Properties  
of Some Secondary and Tertiary  $\gamma$ -Silicon-  
containing Acetylene Alcohols

S079/60/030/009/005/015  
B001/B064

SUBMITTED: September 21, 1959

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S/081/62/000/016/011/043  
B168/B186

AUTHORS: Shikhiyev, I. A., Aliyev, M. I., Guseyn-Zade, B. Kh.,  
Karayeva, Sh. V.

TITLE: Synthesis of acetylene alcohols containing  $\gamma$ -silicohydride  
and their dehydrocondensation by dimethylphenylsilanol

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 16, 1962, 235, abstract  
16Zh271 (Azerb. khim. zh., no. 3, 1961, 67-70 [summary in  
Azerb.] )

TEXT: Production of  $RR'C(OH)C \equiv CSiHR_2$  (I, where  $R = CH_3, C_2H_5$ ;  
 $R' = CH_3, C_2H_5, \text{tert-}C_4H_9$ ;  $R'' = CH_3, C_2H_5$ ) by the reaction of  
 $RR'C(OMgBr)C \equiv CMgBr$  with  $R_2''SiHCl$  (II) is described. The reaction of I  
with  $C_6H_5(CH_3)_2SiOH$  (III) produces  $RR'C(OH)C \equiv CSi(R_2'')OSi(CH_3)_2C_6H_5$  (IV)  
with liberation of  $H_2$ . The presence of an OH group in I is proved by  
acetalization and by the fact that the corresponding siloxy derivatives are

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produced in accordance with the formula:  $I + CH_2 = CHOC_4H_9$  (V)  
 $\rightarrow CH_3CH(OC_4H_9)OC(RR')C \equiv CSiHR_2''$  (VI). 0.2 mole II ( $R_2'' = CH_3$  and  $C_2H_5$ )  
 is gradually added, during cooling, to Iotsich's reagent (consisting of  
 0.4 mole  $C_2H_5Br$ , 0.4 mole Mg and 0.2 mole methyl-tert-butylacetylenyl-  
 carbinol); after 12 hr this mixture is heated for 6 hr, after 4 hr ( $20^\circ C$ )  
 it is decomposed with dilute HCl and I ( $R = CH_3$ ,  $R' = tert-C_4H_9$ ,  
 $R_2'' = CH_3$  and  $C_2H_5$ ) (Ia) (here and henceforth yield in %, boiling point in  
 $^\circ C/mm$ ,  $n_D^{20}$ ,  $d_4^{20}$  will be given for isolated substances), 26.3, 69/2,  
 1.4603, 0.8768, is isolated from the ester layer. 0.01 g  $ZnCl_2$  is added to  
 a mixture of 0.05 mole Ia and 0.05 mole III in  $C_6H_6$ ; when evolution of  $H_2$   
 has ceased the  $C_6H_6$  is driven off and IV ( $R = CH_3$ ,  $R' = tert-C_4H_9$ ,  
 $R_2'' = CH_3$  and  $C_2H_5$ ), 21.55, 106/0.18, 1.5124, 0.9842, is isolated from the  
 residue. 0.2 ml 33 % HCl is added to a mixture of 0.03 mole I  
 ( $R = R' = CH_3$ ,  $R_2'' = CH_3$  and  $C_2H_5$ ) and 0.03 mole V; this is heated for

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30 min at 70°C and neutralized after 12 hr with calcined  $K_2CO_3$ , and VI  
( $R = R' = CH_3$ ,  $R_2'' = CH_3$ ,  $C_2H_5$ ), 26.04, 119/4, 1.4422, 0.8725, is  
isolated from it. Other representatives of this class of compound are  
produced in a similar manner. [Abstracter's note: Complete translation.]

Card 3/3

KARAYEVA, V.Sh., assistant

Click beetles in hemp fields. Uch. zap. Kab.-Balk. gos. un.  
no.12:167-169 '62. (MIRA 16:6)

1. Kafedra zoologii Kabardino-Balkarskogo gosudarstvennogo  
universiteta. (Hemp—Diseases and pests) (Wireworms)



KARAYEVA, V. Sh., assistant

Some data on predatory insects in the biocenose of hemp.

Uch. zap. Kab.-Balk. gos. un. no.12:171-172 '62.

(MIRA 16:6)

1. Kafedra zoologii Kabardino-Balkarskogo gosudarstvennogo universiteta.

(Kabardino-Balkar A.S.S.R.—Hemp—Diseases  
and pests)

(Kabardino-Balkar A.S.S.R.—Insects, Injurious  
and beneficial—Biological control)

KARAYEVA, V.Sh.

Presowing treatment of hemp seed; preliminary report. Uch.zap.  
Kab.-Balk. gos. un. no.14:112-115'62. (MIRA 16:6)  
(TEREK DISTRICT—HEMP—DISEASES AND PESTS)  
(INSECTICIDES)

KARAYEVA, V.S.

Microhardness of the grain of durum and soft wheat of the Azerbaijan S.S.R. Dokl. AN Azerb. SSR 21 no.4:58-60 '65.

(MIRA 18:7)

1. Institut genetiki i selektsii AN AzerSSR.

KARAYEVA, V.S.

Bread and macaroni producing properties of durum winter wheat  
of the Azerbaijan S.S.R. Dokl. AN Azerb. SSR 21 no.5:78-81 '65.  
(MIRA 18:9)

1. Institut genetiki i selektsii AN AzerSSR.

132-58-6-5/13

AUTHORS: Karayeva, Z.G. and Chesnokov, O. F.

TITLE: Experience in the Use of Spectro-Metallometric Surveying in Prospecting for Deposits of Pegmatites Containing Rare Metals in Covered Regions (Opyt primeneniya spektrometallometricheskoy s"yemki pri poiskakh mestorozhdeniy redkometal'nykh pegmatitov v zakrytykh rayonakh)

PERIODICAL: Razvedka i Okhrana Nedr, 1958, Nr 6, pp 32-36 (USSR)

ABSTRACT: Prospecting operations to locate mineral deposits in wood regions are very often difficult. The best way to prospect such regions is to use the metallometric survey together with Schlich (Shlikh) assaying and electric prospecting. All these operations were conducted in the same section of the region: metallometric and schlicht samples were taken from the same prospecting hole and an electro-prospecting survey was conducted on the same profiles. The results of all operations were fixed on the map. The deposit contained various rare minerals and, as most of them has a very low migrational capability, beryllium and lithium were chosen as element-indicators. The spectral analysis showed that the contents of lithium varied from 0.002 to 0.005% and the contents of

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132-58-6-5/13  
Experience in the Use of Spectro-Metallometric Surveying in Prospecting for  
Deposits of Pegmatites Containing Rare Metals in Covered Regions

beryllium - 0.001 to 0.002%. Detailed metallometric sampling and schlicht assaying was done and marked on the map, which showed the complete concordance of all three findings. The authors describe the spectral analysis of the metallometric samples, in which the visual method of determination of lithium was found to be the best for quantitative analysis. There is 1 map and 6 Soviet references.

ASSOCIATION: VIMS and Sibgeofiztrest

AVAILABLE: Library of Congress

Card 2/2      1. Geology    2. Surveying-Operation    3. Geophysical prospecting

KARAYEVA, Z.M.

Treatment of fungus diseases of the scalp with 20% acetic acid. Vest.  
vener., Moskva no.3:17-18 May-June 1953. (GLML 25:1)

1. Of the Belorussian Skin-Venereological Institute (Director -- Prof.  
A. Ya. Prokopchuk).



KARAYEVA, Z.S.

Ash composition of some plants in the Bet-Pak-Dala Desert.  
Pochvovedenie no.3:94-104 Mr '63. (MIRA 16:3)

1. Pochvennyy institut imeni V.V.Dokuchayeva.  
(Bet-Pak-Dala-Plants-Chemical analysis)

SOKOLOV, I.A.; KARAYEVA, Z.S.

Migration of humus and some elements in the profile of volcanic  
forest soils in Kamchatka. Pochvovedenie no.5:12-21 My '65.  
(MIRA 18:5)

1. Pochvennyy Institut Imeni Dokuchayeva, Moskva.

FRIDLAND, V. M.; KARAYEVA, Z. S.

Origin of acid salinized soils. Pochvovedenie no. 7:77-81  
Jl '62. (MIRA 15:10)

1. Pochvennyy institut imeni V. V. Dokuchayeva.

(Vietnam, North—Saline and alkali soils)

KARA-ZADE, T.K.; ABLAYEV, E.M.

Blood transfusion in amyloidosis of the internal organs. Med. zhur.  
Uzb. no.10:70-71 0. '60 (MIRA 13:12)

1. Iz Samarkandskogo gorodskogo tuberkuleznogo dizpansera.  
(BLOOD—TRANSFUSION) (AMYLOIDOSIS)

NEKHAYCHIK, N.; KARAZANOVA, Ye.; BELAYA, V.

Prevention of diphtheria. Zdrav. Belor. 6 no. 5:54 My '60.  
(MIRA 13:10)

(BEREZINA DISTRICT—DIPHTHERIA)

BRUSILOVSKIY, K.A.; KARAZEY, Z.I.

Noncontact transducer for telegraph test signals. Elektrosvyaz'  
14 no. 12:56-60 D '60. (MIRA 13:12)  
(Telegraph--Testing) (Transducers)

IVANOV, B.I.; SHARONOVA, N.F.; KUZ'MINA, N.A.; KARAZEYEVA, L.N.

Purifying the industrial waste waters of vinyl acetate and  
the polymers based on it. Trudy VNIIT no.12:270-289 '63.  
(MIRA 18:11)

BREYEV, K.A.; KARAZEYeva, Z.F.

Material on the biology of the warble fly *Oedemagana tarandi* L. Paraz.  
sbor. 14:95-102 '52. (MLRA 6:6)

(Warble flies)

(Parasites--Reindeer)



KARAZEYEVA, Z.F.

BREYEV, K.A.; KARAZEYEVA, Z.F.

Materials on the biology of the deer bot *Oedemagena tarandi* L.  
of the reindeer. Paraz.sbor. 15:410-424 '53. (MLRA 7:5)  
(Parasites--Reindeer) (Warble flies)

KARAZEYeva, Z. F.

COUNTRY : USSR  
 CATEGORY : Zooparasitology. Acarids and Insects as Vectors of Disease. Insects  
 ABS. JOUR. : RZhBiol., No. 4 1959, No. 15050  
 AUTHOR : Breyev, N. A.; Karazeyeva, Z. F.  
 INST. :  
 TITLE : Data on the Biology of the Reindeer Fly Oedemagena tarandi L: III. Observations upon Pupae and Adult Reindeer Flies  
 ORIG. PUB. : Parazitol. sb., 1957, 17, 199-228  
 ABSTRACT : Experiments on the survival of pupae on different soils permit to recommend the pasturing of reindeer (R) in the period of the massive falling out of larvae in low marshy places, and to provide rest for R in sections with firm ground without vegetative cover. Out of 1,580 reindeer flies caught in nature, only 0.8% males were found. In the laboratory a case of twofold copulation

CARD: 1/4

30

COUNTRY :  
 CATEGORY :  
 ABS. JOUR. : RZhBiol., No. 4 1959, No. 15050  
 AUTHOR :  
 INST. :  
 TITLE :

ORIG. PUB. :

ABSTRACT : of one pair of reindeer flies was observed. Flight in European tundras occurs from the end of June or the beginning of July until the beginning of September. The flight may take place at the temperature of not less than 7.4° in sunny weather and not less than 13° in cloudy weather. In sunny weather, the attack of females (F) causes great unrest of R; at the same time, F succeed in laying only an insignificant part of their eggs. In cloudy weather, when R lies down

CARD: 2/4

COUNTRY :  
 CATEGORY :

ABS. JOUR. : RZhBiol., No. 4 1959, No. 15050

ACC NR: AP7007210

(A)

SOURCE CODE: UR/0031/66/000/012/0045/0048

AUTHOR: Baykonurov, O. A. Ibrayev, Sh. I.; Vinokurov, L. V.; Karazhanov, D.

ORG: none

TITLE: Method of determining the relative power of various explosives in simulating an explosion

SOURCE: AN KazSSR. Vestnik, no. 12, 1966, 45-48

TOPIC TAGS: chemical explosion, underground explosion, explosive charge

ABSTRACT: In present-day experimental studies on models made of synthetic material, efforts are made to determine the qualitative characteristics of the destruction of rocks by explosions. On the basis of the mechanical characteristics of the equivalent material employed, the explosive commonly used in laboratory explosions consists of 16% mercury fulminate, 55.5% potassium chlorate and 28.5% antimony. An attempt was made to determine the power of this explosive mixture relative to industrial explosives. This was done as follows: first, by measuring the seismic vibrations, a certain fraction of energy was determined for the explosive studied and for an industrial explosive (1 g Teteryl + 0.5 g mercury fulminate, a mixture used in the ED-8-56 electric detonator), whose energy was determined from existing formulas. The comparison method was then employed. This involved measuring the seismic vibrations from the explosive whose energy was known, then the vibrations from the explosive

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ACC NR: AP7007210

whose energy was unknown. Finally, the energy of the seismic wave was calculated for maximum values (obtained from oscillograms) of both explosions, and the ratio of these energies was taken. It was found that the explosive composition used for laboratory tests is 20.5 times weaker than the mixture used in the ED-8-56 electric detonator, and 10-12 times weaker than ordinary underground ammonites (No. 6, 7, etc.). Orig. art. has: 2 figures, 1 table and 8 formulas.

SUB CODE: 19/ SUEM DATE: none

Card

2/2

BAYRKHUNOV, O.A.; KOVRICO, A.F.; KARAZHANOV, D.D.

Simulation in studying blasthole drilling in the Dzhezkazgan  
mines. Vest. AN Kazakh. SSR 20 no.12:41-50 D '64  
(MIRA 18:2)

KARAZHANOV, N.A. (Gur'yev)

Flow method of dissolving nonfixed crystals. Zhur. fiz. khim.  
38 no.4:921-926 Ap '64. (MIRA 17:6)

1. Institut khimii nefti i prirodnykh soley AN KazSSR.

KARAZHANOV, N.A.

Determination of the solubility of inyoite in solutions of  
salts by the kinetic method. Izv. AN Kazakh. SSR. Ser. khim.  
nauk 14 no.1:34-40 Ja-Mr '64. (MIRA 18:3)

KARAZHANOV, N. A. Cand Chem Sci -- (diss) "Kinetics of the solution of calcium and ~~calcium~~ magnesium sulfates." Alma-Ata, 1959. 14 pp (Kazakh State Univ im S. M. Kirov), 100 copies (KL, 50-59, 124)



KARAZIK, G. Ya.

Existence of periodic solutions to a system of differential  
equations with retarded argument. Sib. mat. zhur. 2 no.4:  
551-555 J1-Ag '61. (MIRA 14:9)  
(Differential equations)

KARAZIN, A.A.; KRYSHCHENKO, I.F.

Moscow city veterinary health station. Veterinariia 33 no.9:56-60  
S '56. (MLRA 9:10)

1.Zamestitel' zaveduyushchego Goredskim veterinarnym otdelen Mosger-  
ispolkoma (for Karazin). 2.Direkter Moskovskoy goredskoy veterinarno-  
sanitarney stantsii (for Kryshchenko).  
(Moscow--Veterinary hygiene)

KARAZIN, A.A.

PUGOVKINA, A.A.; KARAZIN, A.A.

Organization of milk and milk product sanitation control in Moscow markets. Veterinariia 34 no.9:73-75 S '57. (MLHA 10:9)

1. Starshiy vetvrach vetotdela Mosgorispolkoma (for Pugovkina).
2. Zamestitel' zaveduyushchego vetotdelom Mosgorispolkoma (for Karazin).

(Moscow--Dairy products--Analysis and examination)

ACC NR: AP6021428

SOURCE CODE: UR/0413/66/000/011/0029/0029

INVENTOR: Karazin, I. V.

ORG: none

TITLE: Optical-mechanical converter of an optical image into an electrical signal.  
Class 21, No. 182190

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 29

TOPIC TAGS: optic image, image converter

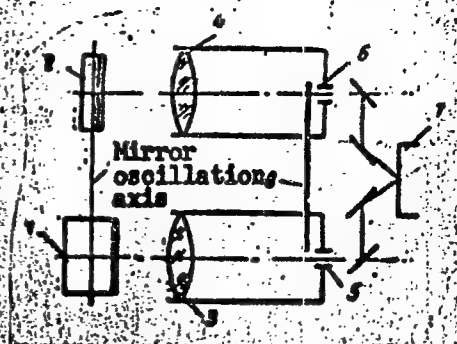
ABSTRACT: This Author Certificate presents an optical-mechanical converter of an optical image to an electric signal, having an oscillating mirror, an objective, a diaphragm, and a photocell. To increase the scanning rate, the converter contains two parallel scanning systems, each consisting of an oscillating mirror, an objective, a diaphragm in the objective focal plane, and a moving shutter (see Fig. 1). The shutter alternately passes the light beam proceeding from each of the two systems onto the photoelectric cell. The systems operate from the phase shift in a half-period.

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UDC: 621.383.8

ACC NR: AP6021428

Fig. 1. 1 and 2 - oscillating mirrors;  
3 and 4 - objectives; 5 and 6 - diaphragms;  
7 - photocell; 8 - shutter



Orig. art. has: 1 diagram.

SUB CODE: 09, 17/ SUBM DATE: 07Apr65

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SOV/120-59-2-15/50

AUTHORS: Bonch-Bruyevich, A.M., Karazin, I.V., Molchanov, V.A.,  
and Shirokov, V.I.

TITLE: An Experimental Model of a Phase Fluorometer  
(Eksperimental'nyy obrazets fazovogo fluorometra)

PERIODICAL: Priory i tekhnika eksperimenta, 1959, Nr 2, pp 53-56  
(USSR)

ABSTRACT: This paper was read at the VI Conference on luminescence in Leningrad. The instrument was exhibited at the Brussels Exhibition in 1958. A finalized laboratory model of a new phase fluorometer is described. The phasemeter section has a resolution of  $0.10$ , which corresponds to  $2 \times 10^{-11}$  sec at the modulation frequency used. The sensitivity to light is high, and is such that emissions many orders of magnitude weaker than that of fluoresceine in alkali can be measured. Several laboratory fluorometers have been described for measuring fluorescence decay times in the  $10^{-8}$  -  $10^{-10}$  sec range, (Refs 1-5). The methods are based on measuring the phase difference  $\phi$  between the emission and the exciting light. The exponential decay constant  $\tau$  is

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## · An Experimental Model of a Phase Fluorometer

where  $F$  is the modulation frequency. In 1954 the authors designed a phase fluorometer in which many sources of error were eliminated; a phase detector, and other devices to facilitate the measurements, were incorporated (Refs 6-8). The instrument described here has been designed on the basis of four years' experience with the 1954 instrument, and in certain respects differs considerably from that instrument. The instrument consists of two main parts, both of which are built into the same console, namely the optical section and the phasemeter system (Fig 1). The apparatus includes units that supply the phasemeter, control the modulator, feed the amplifiers, etc. The optical system is fitted on a horizontal table and is divided into three sections closed by light-tight covers. The phasemeter system is installed in the vertical rear section; the stabilized supplies (rectifiers, etc) and the modulator unit are fitted in the base of the console. The resolution is about  $0.1^\circ$ . The minimum error of a single measurement of  $\tau$  for a bright emission (for low noise levels) is less than 2% (apart from systematic errors); the general

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An Experimental Model of a Phase Fluorometer

errors are

- 5% at  $\tau = 10^{-9}$  to  $10^{-8}$  sec;
- 10% at  $\tau = 5 \cdot 10^{-10}$  to  $5 \cdot 10^{-8}$  sec;
- 20% at  $\tau = 2.5 \cdot 10^{-10}$  to  $10^{-7}$  sec.

The high sensitivity to light enables one to use emissions that are 3-4 orders of magnitude weaker than the emission from a  $10^{-4}$ M solution of fluorscein in alkali. The error increases as the brightness decreases. The light source is a high-pressure mercury arc SVDSH-250 (Fig 2). A diffraction modulator is used to modulate the light flux, for which purpose we have used standing waves generated by a barium titanate plate, (Ref 9) in aqueous ethanol (17%). The plane of the exit slit can be projected in magnified form on a special fluorescent screen (Fig 2) during adjustments; the modulator can thereby be adjusted for visible or ultra-violet light. Instability caused by incorrect beam-splitting (Ref 10) is avoided by inserting filters separately in the two channels. The light entering the sample channel (some 95% of the total output from the

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An Experimental Model of a Phase Fluorometer SOV/120-59-2-15/50

modulator) enters the middle section of the instrument and strikes either a scatterer or the specimen. The scattered exciting light is used in setting-up; normally the fluorescence is recorded by a photomultiplier (FEU-18, FEU-19, FEU-22 or FEU-25), whose output feeds the specimen channel. The scatterer and the sample are fixed to a moving table. A filter is fitted between the sample and the multiplier to cut out the exciting light. The table is driven by a motor, and can turn or reciprocate. Twelve stops give positions where the table comes to rest. At each stop position a neutral filter is automatically inserted in the exciting beam. These filters are used to match the intensities of the exciting and fluorescence beams roughly, in order to avoid amplitude-dependent phase errors caused by the photomultiplier (Ref 8). These neutral platinum filters are contained in a special holder, and any appropriate number of them can be introduced with the cover of the section closed. The filters are such as to give a maximum attenuation of about  $10^4$ , and to match the intensities to about 20%. The phasemeter system is a symmetrical

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## An Experimental Model of a Phase Fluorometer

two-channel one (Fig 3). The signals are amplified at two frequencies (436 and 25 kc/s). The system enables one to select the best operating frequency ( $6.5 \pm 0.15$  Mc/s) and to keep it constant within the stability of a quartz oscillator. To this end the frequency of a tunable oscillator ( $F_1 = 4.018 \pm 0.150$  Mc/s) is heterodyned with quartz oscillators ( $F_2 = 2.5$  Mcps and  $F_3 = 2.282$  Mc/s) in two mixers. The output from one mixer ( $F_1 + F_2$ ) is fed to the modulator, whilst the output from the second mixer is doubled in frequency (because the light is modulated at a frequency double that of the supply voltage) and is fed to the first mixers in the two channels. The first working frequency is thus  $2(F_2 - F_3)$ , which does not depend on  $F_1$ ; its stability is determined by the stabilities of  $F_2$  and  $F_3$  only. The second working frequency is correspondingly stable. Any change in phase at one of the inputs is accompanied by an equal change of phase difference at the outputs of the amplifying channels. The quartz oscillators increase the stability of the phase reading and of the calibration of the phase shifters (which work at 25 kc/s) without

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substantially increasing the complexity. Bridge-type phase-shifters are used; the output voltage is not affected by changes in the phase shift. One channel has an uncalibrated phase-shifter with a total range of 360° (it is used to set the zero on the exciting light); the other channel has three standard decade shifters, with steps of 100, 10 and 0.1° respectively. These three units provide a shift of 180° in equal steps. A phase-shift cutout is fitted, to remove the shift introduced by these units. The cutout is operated manually or automatically when the zero is being set. In this way  $\phi$  can be measured repeatedly without disturbance to the knobs on the phase-shifters; this improves the convenience and the accuracy. The automatic gain control keeps the signal level constant in parts of the circuit where amplitude-dependent phase errors are most likely (Ref 6). The AGC stages are designed not to produce parasitic phase shifts for input signals within the range 50  $\mu$ v (threshold) to 50 mV, (Ref 8). The control coefficient of the AGC system is about 5000. The manual gain control is used to prevent overloading

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on bright emissions. Electronic voltmeters in the AGC circuits indicate the signal levels; these meters are used to equalize the signals in the two channels roughly. There are two output indicators, namely an oscilloscope and a phase-sensitive detector with a meter. The oscilloscope is used only for rough measurements, and to indicate the noise level. The phase-sensitive detector is used as a null indicator. The time-constant and sensitivity of this detector are adjustable; the values are chosen in accordance with the noise level. So far as we are aware, this is the first fluorometer to have reached a finalized laboratory form. D.N. Kaydinov and M.S. Gitman helped in building the apparatus and in designing the phase-meter sections; to them we offer our thanks. We also wish to thank V.P. Kovalev, who did much to help in finalizing the phasemeter design. This is a complete translation, apart from Fig 3. There are 3 figures and 10 references, of which 2 are English, 1 is German and 7 are Soviet.

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Figure captions are: Fig 1, general view of the fluorometer. Fig 2, 1) SVDSH-250 lamp, 2) condenser

An Experimental Model of a Phase Fluorometer SOV/120-59-2-15/50

system, 3) entrance slit, 4) exit slit, 5) condenser lens, 6) exit lens, 7) modulation cell, 8) fluorescent screen, 9) mirror used to observe diffraction pattern, 10) filter to select exciting wavelength, 11) stop, 12) beam-splitter, 13) scatterer, 14) photomultiplier in channel II, 15) scatterer or specimen, 16) photomultiplier in channel I (sample), 17) moving stage, 18) filter, 19) lens, 20) set of neutral filters.

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ASSOCIATION: Gosudarstvennyy opticheskiy institut  
(State Optical Institute)

SUBMITTED: June 2, 1958

KARAZINA, S. A., Candidate of Biol Sci (diss) -- "The role of the orientation reaction in the process of developing electrocortical temporary connections in man". Moscow, 1959. 15 pp (First Moscow Order of Lenin Med Inst im I. M. Sechenov), 200 copies (KL, No 20, 1959, 110)

KARAZINA, S.A.

Electrocortical dynamic stereotype and the condition for its  
persistent manifestation. Dokl. AN SSSR 150 no.3:698-701  
My '63. (MIRA 16:6)

1. TSentral'nyy institut usovershenstvovaniya vrachey.  
Predstavleno akademikom A.N. Bakulevym.  
(Electroencephalography)  
(Stereotype(Psychology))

KARAZINA, S.A.

Conditions for the stabilization and extinction of electrocortical temporary connections. Dokl. AN SSSR 150 no.5:1174-1177 Je '63.  
(MIRA 16:8)

1. Tsentral'nyy institut usovershenstvovaniya vrachey. Predstavleno akademikom A.N.Bakulevym.

(ELECTROENCEPHALOGRAPHY) (CONDITIONED RESPONSE)



L 12844-63

BDS

ACCESSION NR: AP3003234

S/0020/63/150/006/1397/1400

AUTHOR: Karakina, S. A.

46

TITLE: Features of the appearance of the EEG activation reaction under the influence of light

SOURCE: AN SSSR. Doklady, v. 150, no. 6, 1963, 1397-1400

TOPIC TAGS: light-induced depression, cortical rhythm, electrocortical association

ABSTRACT: Light-induced depression of cortical rhythm was studied in 3 series of experiments on 12 healthy adults. The EEG was recorded with monopolar leads from the temporal, parietal, and occipital regions. In each series, some 1000 stimuli, single or paired, were presented to each subject. In the first series, only light was presented for 3 seconds at varying intervals; in the second, the 3-second light stimulus was used to reinforce a conditioned (painful) stimulus; and in the third, it was used as a conditioned stimulus, with painful stimulation as the unconditioned stimulus. With light only, the duration of the activation reaction to each presentation of light was inconstant (undulating reaction curve), and it diminished with repetition of the stimulus,

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L 12844-63

ACCESSION NR: AP3003234

disappearing almost completely after 750 presentations, increasing slightly thereafter, and then appearing in only 6% of the cases in the ninth experiment, and in only 3% in the 10th. When light was used as a reinforcer for the unconditioned stimulus (series 2), the reaction diminished with repetition but did not disappear altogether, and the same was true in series 3. Thus, light is suitable as a component of a conditioned-reflex pair for creating temporary electrocortical associations, but when used alone, the reaction developing on repetition is similar to that observed in extinction with reinforcement. This report was presented by Academician A. N. Bakulev, 30 Nov 62. Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 15Jun62

DATE ACQ: 24Jul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 005

OTHER: 004

Cord 2/2

KARAZINA, Yu.I. (Moskva)

History of the Krasnokutsk Park in Kharkov Province. Bnl.  
Glav. bot. sada no. 39:25-32 '60. (MIRA 14:5)  
(Krasnokutsk District—Botanical gardens)

KARAZIYAYTE, L. P.

"The Problem of the Etiology and Pathogenesis of Suffocation of the Newborn." Cand Med Sci, Vil'nyus State U, Min Higher Education USSR, Vil'nyus, 1955. (KL, No 10, Mar 55)

SQ: Sum. No. 670, 29 Sep 55--Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

L 30072-65 EWT(1) JJP(c)  
ACCESSION NR: AT5002039

S/2910/64/004/002/0197/0212

AUTHOR: Rutis, A. P. (Jucys, A.); Vizbarayte, Ya. A.; Karaziya, R. I.; Savukinas, A. Yu.; (Vizbaraitė, J.); (Karaziya, R.); (Savukynas, A.); Bandraitis, A. 24 23 22 21

TITLE: Calculation of matrix elements of the electrostatic interaction operator for complex atoms

SOURCE: AN LitSSR. Litovskiy fizicheskii sbornik, v. 4, no. 2, 1964, 197-212

TOPIC TAGS: quantum mechanics, matrix, electron shell, electrostatic interaction, energy operator, quantum theory, wave function, Racah operator

ABSTRACT: In recent years, the tabulation of the submatrix elements of operators has been carried out to an extent which permits operations with the shells of s-, p- and d-electrons. This has stimulated the consideration of a method for calculation of the matrix elements of the operators. The present work is limited to the consideration of the expressions for the matrix elements of the electrostatic interaction operator for the case of complex configurations. For simplicity, the case of two either partially filled or almost completely filled shells is considered first. Then a method is developed for calculations in the case of any number of

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L 30072-65  
ACCESSION NR: AT5002009

unfilled shells. The article first reviews the information on the unit tensor operators as described in the work of Racah (Phys. Rev. 62, 438 (1942); Phys. Rev. 63, 367 (1943)). The explicit formulae are given for two unfilled electron shells. In the case of three or four unfilled shells more general formulae are given, which permit easy calculation of the explicit formulae. In the case of almost filled shells, the relationships between the submatrix elements of the additional shells are utilized. The formulae for the matrix elements contain the  $3n_j$ -coefficients for which the number of parameters does not exceed 6 ( $n = 2$ ). Their use becomes very simple since the tables are available for 6j coefficients. Orig. art. has: 57 equations.

ASSOCIATION: Vil'nyuskiy Gosudarstvennyy universitet im. V. Kapsukas (Vilnius state university); Institut fiziki i matematiki Akademii nauk Litovskoy SSR (Physics and mathematics institute, Academy of sciences, Lithuanian SSR)

SUBMITTED: 18Jul63

ENCL: 00

SUB CODE: GP, NP

NO REF SOV: 012

OTHER: 007

Card 2/2

KARAZOV, D. F.

21 Aug 53

USSR/Mathematics - Operators

"Theory of Symmetrizable Operators That Are Polynomially Dependent Upon a Parameter," D. F. Karazov; Tbilisi Math Inst im A. Razmadze, Acad Sci Georgian SSR

DAN SSSR, Vol 91, No 6, pp 1285-1287

Considers the eq  $x - \sum_{k=0}^m \lambda A_k x = y$ , where  $A_k$  ( $k=0,1,\dots,m$ ) are completely continuous operators reflecting a certain Hilbert space  $X$  into itself, and  $\lambda$  is a complex parameter. Demonstrates 8

theorems on eigenvalues of operators  $A_k$ . States that the results obtained are being applied to an investigation of boundary-value problems in the theory of differential eqs both ordinary and partial. Presented by Acad A. N. Kolmogorov 4 Jun 53. 275T84

KARBA, A.;COP,S.

KARBA,A.;COP,S. Effect of speed and temperature of casting upon the quality of  
blocks.

Vol.6, No. 1, April, 1955      NOVA PROIZVODNJA

SO: Monthly List East European Accessions, (EEAL), LC, Vol.5, No.3  
March, 1956



KAVANAR, John, Mr.; KROMAR, James, Mr.; NUCIC, G., Dr.; ZEMVA, Minica,  
Mr.; KARBA, Dusan, Mr.; BOHINC, Pavle, Mr.

Book reviews. Farmaceut vest 14 no.10/12:251-259 '63.

KARBA, Dusan, mr.

Steroida hormones. Farmaceut vest 15 n .1/3:10-18 '64.

YARENKO, S.V.; KARBACH, Ya.G. [Karbach, I.A.I.]

Amino acid composition of hemolytic Streptococci. Mikrobiol.zhur.  
26 no.6:58-62 '64. (MIRA 18:8)

1. L'vovskiy nauchno-issledovatel'skiy institut epidemiologii,  
mikrobiologii i gigiyeny.

KARBACH, Ya.I.

Quantitative chromatographic determination of bile acids in the  
bile and blood. Biokhimiia 26 no.2:305-309 Mr-Apr '61.

(MIRA 14:5)

1. Chair of Pharmacology, Medical Institute, Lvov.  
(BILE ACIDS) (PAPER CHROMATOGRAPHY)

KARBACH, Ya.I.

Method for quantitative determination of bile acids in the blood.  
Ukr. biokhim. zhur. 33 no.3:420-430 '61. (MIRA 14:6)

1. Kafedra farmakologii i kafedra biokhimii L'vovskogo gosudarstvennogo  
meditsinskogo instituta.  
(BILE ACIDS) (BLOOD—ANALYSIS AND CHEMISTRY)

KARBAINOV, M. A., Cand Vet Sci -- (diss) "Morphological Changes  
in the cervical <sup>portion</sup> ~~section~~ of the vegetative nervous system and  
lungs of <sup>hogs</sup> ~~swine~~ during vaccination with antiplague crystal violet  
vaccine." Len, 1957, 15 pp (Len Vet Inst, Min Agr), 100 copies  
(KL, 52-57, 110)

- 97 -

COUNTRY : USSR  
 CATEGORY : Diseases of Farm Animals. R  
 Disease Caused by Bacteria and Fungi.  
 ABC. JOUR. : RZhEiol., No. 3, 1959, No. 1-132  
 AUTHOR : Polakovsky, V. I.; Uspensky, N. A.  
 INST. : Lenin and Institute for the Advanced Training  
 TITLE : Specific Tuberculin Reactions in Cattle Infected with Fascioliasis.  
 ORIG. PUB. : So. zhurn. tr. Leninar. inst usoversh. vet. znaniy, 1959, vyp. 11, 81-85  
 ABSTRACT : It was shown that cattle afflicted by fascioliasis but not by any other disease reacts to tuberculin negatively. Incidences of doubtful intracutaneous reactions in normally fat cattle are explained by a non-specific increased reactivity of the skin.

CARD: 1/1  
 \*of Veterinarians.

KARBAINOV, M. A.

USSR/Diseases of Farm Animals. Diseases Caused by  
Viruses and Rickettsiae.

R

Abs Jour: Ref Zhur-Biol., No 5, 1958, 21593.

Author : Karbainov, M. A.

Inst : Buryat-Mongolian Institute of Zoological and Veterinary  
Sciences.

Title : Morphological Changes in the Cervical Section of the  
Vegetative Nervous System and in the Lungs of Pigs  
Vaccinated with Antiplague Crystal Violet Vaccine.

Orig Pub: Tr. Buryat-Mong. zoovet. in-ta, 1957, vyp. 11, 155-  
159.

Abstract: One to three days after intramuscular inoculation of  
immature pigs with 5-30 ml. of crystal-violet vaccine  
and erythrocrystal-violet glycerin vaccine into the

Card : 1/3



USSR/Diseases of Farm Animals. Diseases Caused by  
Viruses and Rickettsiae.

R

Abs Jour: Ref Zhur-Biol., No 5, 1958, 21593.

neck area, a retrogressive degeneration with central chromatolysis in the ganglion cells of the cervical section of the vegetative nervous system was observed. In the nerve fibers, argentophilia and swelling of neurofibril axis cylinders were noted. Four to eight days after the vaccination a part of the nerve fibers died, and fragmentation and disintegration of the axis cylinders of the vagus nerve took place. In almost all of the immature pigs pathomorphologic changes were present in the lungs (bronchitis and peribronchitis, as well as pneumonia), and their intensity was in direct proportion to the changes in the cervical section of the vegetative nervous system. In piglets who were vaccinated in the femoral area with the same vaccines, there was not

Card : 2/3

USSR/Diseases of Farm Animals. Diseases Caused by Viruses  
and Rickettsiae.

R

Abs Jour: Ref Zhur-Biol., No 5, 1958, 21593.

even one case of inflammatory lung symptoms. Thus,  
the obtained data deem it advisable not to administer  
the vaccine into the neck area of pigs but into other  
parts of their body.

Card : 3/3

KARBAINOV, Yu.A.; STROMBERG, A.G.

Increase in the sensitivity of the method of amalgam polarography with storage by the enlargement of the surface area of ammonium mercury amalgam at higher temperature in nonaqueous solutions. Zhur. anal. khim. 20 no.8:769-774 '65. (MIRA 18:10)

1. Tsvetkovskiy politekhnicheskii institut.

1 25649-65 EPF(c)/EWP(j)/LWT(a) Po-4/Pr-4 RM  
ACCESSION NR: AR5001707 S/0081/64/000/017/D072/D073

SOURCE: Ref. zh. Khimiya, Abs. 17B458

AUTHOR: Karbainov, Yu. A.; Stromberg, A. G.

TITLE: A study of the electrical conductivity of binary mixtures of silicon tetrachloride and aliphatic oxygen-containing compounds for the purpose of determining trace impurities in highly purified silicon tetrachloride

CITED SOURCE: Dokl. 2-y Mezhdunar. konferentsii po khimii organ. kompleksn. soyedineniy, 1963. Tomsk, Tomskiy un-t, 1963, 20-22

TOPIC TACS: silicon tetrachloride, silicon tetrachloride conductivity, silicon-organic complex, silicon tetrachloride, purity, complex formation, acetic acid, chloroacetic acid, propyl alcohol, electrical conductivity, anisol

TRANSLATION: The authors studied the electrical conductivity  $\chi$  of binary mixtures of  $\text{SiCl}_4$  and aliphatic oxygen-containing compounds (acetic acid, chloroacetic acid, ethyl chloroacetate, anisol, propyl alcohol and isopropyl alcohol) at 180 in the concentration range of 0-30 mol.%  $\text{SiCl}_4$ . In addition, they studied the conductivity of the system  $\text{SiCl}_4$  - acetic acid - sodium acetate at various

L 25049-65

ACCESSION NR: AR5000707

concentrations of sodium acetate. The results showed that maximal  $\chi$  is obtained in all binary systems at an  $\text{SiCl}_4$  content of 6-8 mol.%. Among the systems studied, the largest maximal conductivity was observed for the binary systems containing propyl and isopropyl alcohol (0.013 and 0.01 mho/cm). Addition of sodium acetate to the binary system of  $\text{SiCl}_4$  (8 mol.%) and acetic acid (92 mol.%) increases the value of  $\chi$  5 fold compared to the binary system. The question of the role of complex formation in the increased conductivity of the systems studied is discussed. In the case of acetic acid, it is suggested that a complex compound of the type  $\text{SiCl}_4 \cdot 2 \text{CH}_3\text{COOH}$  forms initially, but that since this is a strong complex acid, it then enters into an acid-base reaction with acetic acid to form  $\text{SiCl}_4 \cdot 3 \text{CH}_3\text{COOH}$ , which decomposes into the ions:  $[\text{SiCl}_3 \cdot 3 \text{CH}_3\text{COOH}]^+$  and  $\text{Cl}^-$ . From the authors' summary

SUB CODE: OG

ENCL: 00

Cord 2/2